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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/718,342	11/24/2000	Richard Ian Taylor	1263.1800	2600
5514	7590	02/04/2005	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO			CARTER, AARON W	
30 ROCKEFELLER PLAZA			ART UNIT	
NEW YORK, NY 10112			PAPER NUMBER	

2625

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/718,342

Applicant(s)

LYONS ET AL.

Examiner

Aaron W Carter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 71-91,98-100 and 151-165 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 71-91,98-100 and 151-165 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This action is responsive to papers filed on October 12, 2004.

#### ***Response to Amendment***

2. In response to applicant's amendment received on October 12, 2004, all requested changes to the specification and claims have been entered. Examiner notes that claim 100 was cancelled in the previous amendment and then brought back in this amendment, in a communication with the attorney this was a mistake and claim 100 should have remained cancelled, but is however acted on in this action.

#### ***Response to Remarks***

3. All the information disclosure statements submitted up to this point have been considered and applicant is correct no IDS was filed on February 26, 2003.
4. The 35 USC 101 rejections of claims 91 and 165 have been overcome by the amendment and are withdrawn.

#### ***Response to Arguments***

5. Applicant's arguments, see Remarks, pages 21-27, filed October 12, 2004, with respect to the rejection(s) of claim(s) 71-91, 98, 99 and 151-165 under 35 USC 102(e) and 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However,

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upon further consideration, a new ground(s) of rejection is made in view of USPN 5,729,471 to Jain et al. and USPN 6,360,116 to Jackson, Jr. et al.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 71-75, 78-84, 87-91, 98-100 and 151-165 rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,729,471 to Jain et al. ("Jain") in view of USPN 6,360,116 to Jackson, Jr. et al. ("Jackson").

As to claim 71, Jain discloses a method of operating an apparatus for generating model data representative of a three dimensional model of an object from input signals representative of a set of camera images of the object taken from a plurality of the camera images of the object:

Displaying a set of icons, each being associated with a respective one of the camera images of the object (Fig. 19a-19d, "Camera 1, 2, 3 and 4" wherein each of the smaller images corresponds to an icon);

Receiving a selection signal responsive to user actuation of an input means whereby the selection signal identifies a selected camera image (column 16, lines 10-16, specifically lines 12-13, user selects the camera to specify the desired perspective);

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Determining a selected camera image from the set of camera images corresponding to the user selection (column 9, lines 25-42 and column 16, 10-16)

Displaying the selected image (Fig. 19a-19d wherein the selected image is displayed in the smaller window);

Determining position data representative of a selected camera position from which the selected image was taken (column 21, line 63 – column 22, line 7);

Generating in accordance with the model a model image representative of a view of the model from a viewpoint corresponding to the position data (column 34, lines 25-29 and Figs 19a-19d); and

Displaying the model image for visual comparison with the selected image by the user (column 34, lines 28-29 and Fig. 19a – 19d).

Jain does not disclose expressly whereby the selection signal identifies a selected one of the icons or smaller windows indicated in Figs. 19a-19d.

However, Jackson discloses:

displaying a set of icons, each being associated with one of the camera images of an object (Fig. 2, elements 21, column 2, lines 49-61 and column 7, lines 17-24, wherein thumbnail corresponds to icon);

receiving a selection signal responsive to user actuation of an input means whereby the selection signal identifies a selected one of the icons (column 7, lines 26-27);

determining a selected camera image from the set of camera images corresponding to the selected icon (Fig. 2, element 21 and column 7, lines 17-34); and

displaying the image (Fig. 2, element 21 and column 7, lines 17-34, wherein the thumbnails are displaying the image).

Jain & Jackson are combinable because they are from the same art of image processing in particular user interfaces in image processing systems.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to provide the three dimension model generating apparatus disclosed by Jain, wherein the images in the smaller windows of Figs. 19a – 19d, which can be considered icons and can be used as a means of selecting a camera image as taught by Jackson.

The suggestion/motivation for doing so would have been that the use of icons as taught by Jackson would allow for the user to define the layout of the images in the system window (Jackson, column 7, lines 17-19).

Therefore, it would have been obvious to combine Jain with Jackson to obtain the invention as specified in claim 71.

As to claim 72, the combination of Jain and Jackson discloses a method as claimed in claim 71, including the step of generating the icons in response to receiving a mode selection input (Jackson, column 6, lines 38-49, wherein the initial mode creating a new plan is the mode that is selected to generate the icons).

As to claim 73, the combination of Jain and Jackson discloses a method as claimed in claim 71, wherein the icons are generated as thumbnail images of the respective camera images (Jackson, column 2, lines 49-61).

As to claim 74, the combination of Jain and Jackson discloses a method as claimed in claim 74, wherein the step of displaying the set of icons comprises displaying the icons in an array and displaying links between the icons such that each pair of icons corresponding to adjacent camera positions in a position sequence of the camera positions is joined by a respective link (Jackson, Fig. 19a – 19d, wherein the smaller windows are considered icons, they are in an array and they are linked by their labeling Camera 1 – 4).

As to claim 75, the combination of Jain and Jackson discloses a method as claimed in claim 74, wherein the icons are displayed in a linear array (Jain, Fig. 19a – 19d, wherein the smaller windows are considered icons, they are in an linear array and Jackson, Fig. 2, element 21).

As to claim 78, the combination of Jain and Jackson discloses a method as claimed in claim 71, comprising generating the selection signal by operation of a pointing means for user actuation in selecting one of the displayed icons (Jackson, column 7, lines 26-27).

As to claim 79, the combination of Jain and Jackson discloses a method as claimed in claim 71, wherein displaying the set of icons comprises displaying a view of the model from a viewpoint in which the icons comprises representation of cameras and are shown at respective positions relative to the model which correspond substantially to the camera positions relative to the object (Jain, Fig. 18).

As to claims 80, 89, 90, 91, 98, 99, 100, 151, 157 and 163-165, please refer to rejections made for claim 71 above.

As to claim 81, please refer to rejections made for claim 72 above.

As to claim 82, please refer to rejections made for claim 73 above.

As to claim 83, please refer to rejections made for claim 74 above.

As to claim 84, please refer to rejections made for claim 75 above.

As to claim 87, please refer to rejections made for claim 78 above.

As to claim 88, please refer to rejections made for claim 79 above.

As to claim 152, the combination of Jain and Jackson discloses a method as claimed in claim 151, wherein the step of rendering the three dimensional computer model data comprises rendering the three dimensional computer model data using texture data to generate image data showing a virtual image of the three dimensional computer model rendered with texture data (Jain, column 27, line 66 – column 28, line 2).

As to claim 153, the combination of Jain and Jackson discloses a method as claimed in claim 151, wherein:

Data defining the field of view and magnification for each respective camera image is stored (Jain, column 28, lines 32-50),

Data defining the field of view and magnification of the identified camera images is read (Jain, column 28, lines 32-50), and



The step of rendering the three dimensional computer model data comprises rendering the three dimensional computer model data in accordance with the viewpoint, field of view and magnification of the identified camera image to generate virtual image data showing a view of the three dimensional computer model that is substantially the same as the view of the object in the identified camera image (Jain, column 28, lines 32-50).

As to claim 154, the combination of Jain and Jackson discloses a method as claimed in claim 151, wherein the step of displaying the icons comprises displaying a representation of the model and displaying each icon at a respective position relative to the representation of the model which corresponds substantially to the position from which the camera image associated with the icon was recorded relative to the object (Jain, Fig. 18).

As to claim 155, the combination of Jain and Jackson discloses a method as claimed in claim 154, wherein each icon is displayed together with a representation of the viewing direction from which the associated camera image was recorded (Jain, Fig. 18).

As to claim 156, the combination of Jain and Jackson discloses a method as claimed in claim 154, wherein each icon is displayed as a representation of a camera (Jain, Fig. 18).

As to claim 158, please refer to rejections made for claim 152.

As to claim 159, please refer to rejections made for claim 153.

As to claim 160, please refer to rejections made for claim 154.

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As to claim 161, please refer to rejections made for claim 155.

As to claim 162, please refer to rejections made for claim 156.

8. Claims 76, 77, 85 and 86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider.

As to claim 76, the combination of Jain and Jackson discloses a method as claimed in claim 71, wherein the selected camera image and the model image are displayed in respective windows (Jain, Fig. 19a-d and Jackson, Fig. 2). Jain and Jackson both neglect to explicitly disclose a further step of providing relative movement of the windows in response to receiving window movement input signals. The Examiner takes Official Notice that the movement of windows is well known to those in the art as attribute of many computer operating systems. It would have been obvious to one of ordinary skill in the art to employ the selected image and model image windows of Jain and Jackson with the ability to be moved around within a display, because this provides the invention with rapid manipulation of the display.

As to claims 77, 85 and 86, please refer to the rejection made for claim 76 above.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 5,182,641 to Diner et al. discloses user choosing between several camera views.

USPN 5,850,352 to Moezzi et al. discloses multiple camera images with a 3-D model generation.

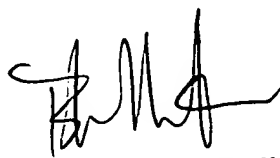
USPN 6,307,550 to Chen et al. discloses multiple camera images and icon display.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron W Carter whose telephone number is (703) 306-4060 or (571) 272-7445 after April 1, 2005. The examiner can normally be reached on 7am - 3:30 am (Mon. - Fri.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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